RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _09/889,331B_

Source: _1 Fw 16_

Date Processed by STIC: _1/14/05_

ENTERED

IFW16

```
 3 <110> APPLICANT: YOUNG, ANDREW
 4        GEDULIN, BRONISLAVA
 6 <120> TITLE OF INVENTION: METHODS FOR GLUCAGON SUPPRESSION
 8 <130> FILE REFERENCE: 030639.0031.UTL (249/167 US)
10 <140> CURRENT APPLICATION NUMBER: 09/889,331B
C--> 11 <141> CURRENT FILING DATE: 2001-12-18
13 <150> PRIOR APPLICATION NUMBER: PCT/US00/00942
14 <151> PRIOR FILING DATE: 2000-01-14
16 <150> PRIOR APPLICATION NUMBER: 60/116,380
17 <151> PRIOR FILING DATE: 1999-01-14
19 <150> PRIOR APPLICATION NUMBER: 60/132,017
20 <151> PRIOR FILING DATE: 1999-04-30
22 <150> PRIOR APPLICATION NUMBER: 60/175,365
23 <151> PRIOR FILING DATE: 2000-01-10
25 <160> NUMBER OF SEQ ID NOS: 239
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
W--> 28 Microsoft Word 97
30 <210> SEQ ID NO: 1
31 <211> LENGTH: 39
32 <212> TYPE: PRT
33 <213> ORGANISM: Heloderma Horridum
35 <220> FEATURE:
36 <221> NAME/KEY: AMIDATION
37 <222> LOCATION: (39)
38 <223> OTHER INFORMATION: Ser in position 39 is amidated
40 <400> SEQUENCE: 1
41 His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
42  1               5                  10                  15
44 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
45              20                  25                  30
47 Ser Gly Ala Pro Pro Pro Ser
48          35
50 <210> SEQ ID NO: 2
51 <211> LENGTH: 39
52 <212> TYPE: PRT
53 <213> ORGANISM: Heloderma Suspectum
55 <220> FEATURE:
56 <221> NAME/KEY: AMIDATION
57 <222> LOCATION: (39)
58 <223> OTHER INFORMATION: Ser in position 39 is amidated
60 <400> SEQUENCE: 2
61 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
62  1               5                  10                  15
```

```
64  Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
65          20                  25                  30
67  Ser Gly Ala Pro Pro Pro Ser
68          35
70  <210> SEQ ID NO: 3
71  <211> LENGTH: 30
72  <212> TYPE: PRT
73  <213> ORGANISM: Artificial Sequence
75  <220> FEATURE:
76  <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
77        Amino Acid Sequence
79  <400> SEQUENCE: 3
80  His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
81  1               5                   10                  15
83  Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly
84          20                  25                  30
86  <210> SEQ ID NO: 4
87  <211> LENGTH: 30
88  <212> TYPE: PRT
89  <213> ORGANISM: Artificial Sequence
91  <220> FEATURE:
92  <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
93        Amino Acid Sequence
95  <220> FEATURE:
96  <221> NAME/KEY: AMIDATION
97  <222> LOCATION: (30)
98  <223> OTHER INFORMATION: Gly in position 30 is amidated
100 <400> SEQUENCE: 4
101 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
102 1               5                   10                  15
104 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly
105         20                  25                  30
107 <210> SEQ ID NO: 5
108 <211> LENGTH: 30
109 <212> TYPE: PRT
110 <213> ORGANISM: Artificial Sequence
112 <220> FEATURE:
113 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
114       Construct
116 <220> FEATURE:
117 <221> NAME/KEY: MOD_RES
118 <222> LOCATION: (30)
119 <223> OTHER INFORMATION: AMIDATION, Position 30 is Gly-NH2
121 <400> SEQUENCE: 5
122 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
123 1               5                   10                  15
125 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly
126         20                  25                  30
128 <210> SEQ ID NO: 6
```

RAW SEQUENCE LISTING   DATE: 01/14/2005
PATENT APPLICATION: US/09/889,331B   TIME: 17:11:43

Input Set : **A:\249-167 subst seq listing.txt**
Output Set: **N:\CRF4\01142005\I889331B.raw**

```
129 <211> LENGTH: 28
130 <212> TYPE: PRT
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
135      Construct
137 <220> FEATURE:
138 <221> NAME/KEY: MOD_RES
139 <222> LOCATION: (28)
140 <223> OTHER INFORMATION: AMIDATION, Position 28 is Asn-NH2
142 <400> SEQUENCE: 6
143 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
144 1               5                  10                  15
146 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
147            20                  25
149 <210> SEQ ID NO: 7
150 <211> LENGTH: 39
151 <212> TYPE: PRT
152 <213> ORGANISM: Artificial Sequence
154 <220> FEATURE:
155 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
156      Construct
158 <220> FEATURE:
159 <221> NAME/KEY: MOD_RES
160 <222> LOCATION: (30)
161 <223> OTHER INFORMATION: AMIDATION, Position 30 is Gly-NH2
163 <400> SEQUENCE: 7
164 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
165 1               5                  10                  15
167 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
168            20                  25                  30
170 Ser Gly Ala Pro Pro Pro Ser
171         35
173 <210> SEQ ID NO: 8
174 <211> LENGTH: 28
175 <212> TYPE: PRT
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
180      Construct
182 <220> FEATURE:
183 <221> NAME/KEY: MOD_RES
184 <222> LOCATION: (28)
185 <223> OTHER INFORMATION: AMIDATION, Position 28 is Asn-NH2
187 <400> SEQUENCE: 8
188 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
189 1               5                  10                  15
191 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
192            20                  25
```

RAW SEQUENCE LISTING   DATE: 01/14/2005
PATENT APPLICATION: US/09/889,331B   TIME: 17:11:43

Input Set : A:\249-167 subst seq listing.txt
Output Set: N:\CRF4\01142005\I889331B.raw

```
194 <210> SEQ ID NO: 9
195 <211> LENGTH: 28
196 <212> TYPE: PRT
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
201        Construct
203 <220> FEATURE:
204 <221> NAME/KEY: MOD_RES
205 <222> LOCATION: (28)
206 <223> OTHER INFORMATION: AMIDATION, Position 28 is Asn-NH2
208 <400> SEQUENCE: 9
209 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu Glu
210 1               5                   10                  15
212 Ala Val Arg Leu Ala Ile Glu Phe Leu Lys Asn
213         20                  25
216 <210> SEQ ID NO: 10
217 <211> LENGTH: 39
218 <212> TYPE: PRT
219 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
223        Construct
225 <220> FEATURE:
226 <221> NAME/KEY: MOD_RES
227 <222> LOCATION: (39)
228 <223> OTHER INFORMATION: AMIDATION, Position 39 is Ser-NH2
230 <400> SEQUENCE: 10
231 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
232 1               5                   10                  15
234 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
235         20                  25                  30
237 Ser Gly Ala Pro Pro Pro Ser
238         35
240 <210> SEQ ID NO: 11
241 <211> LENGTH: 39
242 <212> TYPE: PRT
243 <213> ORGANISM: Artificial Sequence
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
247        Construct
249 <220> FEATURE:
250 <221> NAME/KEY: MOD_RES
251 <222> LOCATION: (39)
252 <223> OTHER INFORMATION: AMIDATION, Position 39 is Ser-NH2
254 <400> SEQUENCE: 11
255 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
256 1               5                   10                  15
258 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
```

RAW SEQUENCE LISTING   DATE: 01/14/2005
PATENT APPLICATION: US/09/889,331B   TIME: 17:11:43

Input Set : A:\249-167 subst seq listing.txt
Output Set: N:\CRF4\01142005\I889331B.raw

```
259              20              25              30
261 Ser Gly Ala Pro Pro Pro Ser
262         35
264 <210> SEQ ID NO: 12
265 <211> LENGTH: 39
266 <212> TYPE: PRT
267 <213> ORGANISM: Artificial Sequence
269 <220> FEATURE:
270 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
271       Construct
273 <220> FEATURE:
274 <221> NAME/KEY: MOD_RES
275 <222> LOCATION: (39)
276 <223> OTHER INFORMATION: AMIDATION, Position 39 is Ser-NH2
278 <400> SEQUENCE: 12
279 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
280 1               5               10              15
282 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
283              20              25              30
285 Ser Gly Ala Pro Pro Pro Ser
286         35
288 <210> SEQ ID NO: 13
289 <211> LENGTH: 39
290 <212> TYPE: PRT
291 <213> ORGANISM: Artificial Sequence
293 <220> FEATURE:
294 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
295       Construct
297 <220> FEATURE:
298 <221> NAME/KEY: MOD_RES
299 <222> LOCATION: (39)
300 <223> OTHER INFORMATION: AMIDATION, Position 39 is Ser-NH2
302 <400> SEQUENCE: 13
303 Tyr Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
304 1               5               10              15
306 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
307              20              25              30
309 Ser Gly Ala Pro Pro Pro Ser
310         35
312 <210> SEQ ID NO: 14
313 <211> LENGTH: 39
314 <212> TYPE: PRT
315 <213> ORGANISM: Artificial Sequence
317 <220> FEATURE:
318 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
319       Construct
321 <220> FEATURE:
322 <221> NAME/KEY: MOD_RES
323 <222> LOCATION: (39)
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 01/14/2005
PATENT APPLICATION: US/09/889,331B   TIME: 17:11:44

Input Set : A:\249-167 subst seq listing.txt
Output Set: N:\CRF4\01142005\I889331B.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:16; Xaa Pos. 6
Seq#:21; Xaa Pos. 10
Seq#:22; Xaa Pos. 10
Seq#:23; Xaa Pos. 14
Seq#:24; Xaa Pos. 14
Seq#:25; Xaa Pos. 22
Seq#:29; Xaa Pos. 23
Seq#:32; Xaa Pos. 31,36,37,38
Seq#:33; Xaa Pos. 36,37,38
Seq#:34; Xaa Pos. 31,36,37,38
Seq#:35; Xaa Pos. 36,37,38
Seq#:36; Xaa Pos. 31,36,37,38
Seq#:37; Xaa Pos. 31,36,37,38
Seq#:38; Xaa Pos. 31,36,37,38
Seq#:39; Xaa Pos. 36,37,38
Seq#:40; Xaa Pos. 31,36,37,38
Seq#:41; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23
Seq#:41; Xaa Pos. 24,25,26,27,28,31,36,37,38
Seq#:42; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23
Seq#:42; Xaa Pos. 24,25,26,27,28,31,36,37,38,39
Seq#:43; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24
Seq#:43; Xaa Pos. 25,26,27,28,31,36,37,38
Seq#:44; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23
Seq#:44; Xaa Pos. 24,25,26,27,28,31,36,37,38
Seq#:45; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,18,20,21,22,23,24
Seq#:45; Xaa Pos. 25,26,27,28,31,36,37,38
Seq#:46; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23
Seq#:46; Xaa Pos. 24,25,26,27,28,31,36,37,38,39
Seq#:47; Xaa Pos. 1,2,3,6,7,8,9,10,14,22,23,24,25,31,36,37,38,39
Seq#:48; Xaa Pos. 1,2,3,6,7,8,9,10,14,22,23,24,25,27,28,31,36,37,38,39
Seq#:91; Xaa Pos. 31,36,37,38
Seq#:92; Xaa Pos. 36,37,38
Seq#:93; Xaa Pos. 31
Seq#:94; Xaa Pos. 31,36,37
Seq#:95; Xaa Pos. 31,36,37
Seq#:96; Xaa Pos. 31,36
Seq#:99; Xaa Pos. 6
Seq#:103; Xaa Pos. 10
Seq#:104; Xaa Pos. 22
Seq#:105; Xaa Pos. 23
Seq#:109; Xaa Pos. 31,36,37
Seq#:110; Xaa Pos. 1,26
Seq#:111; Xaa Pos. 1,26
Seq#:112; Xaa Pos. 1,26

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 01/14/2005
PATENT APPLICATION: US/09/889,331B   TIME: 17:11:44

Input Set : **A:\249-167 subst seq listing.txt**
Output Set: **N:\CRF4\01142005\I889331B.raw**

Seq#:113; Xaa Pos. 1,26
Seq#:114; Xaa Pos. 1,27
Seq#:115; Xaa Pos. 1,27
Seq#:116; Xaa Pos. 1,27
Seq#:117; Xaa Pos. 1,27
Seq#:133; Xaa Pos. 6
Seq#:134; Xaa Pos. 6

VERIFICATION SUMMARY   DATE: 01/14/2005
PATENT APPLICATION: **US/09/889,331B**   TIME: 17:11:44

Input Set : **A:\249-167 subst seq listing.txt**
Output Set: **N:\CRF4\01142005\I889331B.raw**

```
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:28 M:259 W: Allowed number of lines exceeded, <170> SOFTWARE:
L:380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:505 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:587 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:619 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:16
L:720 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:16
L:802 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:16
M:341 Repeated in SeqNo=32
L:834 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:32
L:865 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:16
M:341 Repeated in SeqNo=34
L:897 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:32
L:928 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:16
M:341 Repeated in SeqNo=36
L:962 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:16
M:341 Repeated in SeqNo=37
L:996 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:16
M:341 Repeated in SeqNo=38
L:1028 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:32
L:1059 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:16
M:341 Repeated in SeqNo=40
L:1262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
M:341 Repeated in SeqNo=41
L:1478 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
M:341 Repeated in SeqNo=42
L:1677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
M:341 Repeated in SeqNo=43
L:1890 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0
M:341 Repeated in SeqNo=44
L:2103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0
M:341 Repeated in SeqNo=45
L:2330 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0
M:341 Repeated in SeqNo=46
L:2442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0
M:341 Repeated in SeqNo=47
L:2566 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0
M:341 Repeated in SeqNo=48
L:3521 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91 after pos.:16
M:341 Repeated in SeqNo=91
L:3554 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:32
L:3580 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93 after pos.:16
L:3614 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:16
M:341 Repeated in SeqNo=94
L:3649 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:16
M:341 Repeated in SeqNo=95
```

VERIFICATION SUMMARY   DATE: 01/14/2005
PATENT APPLICATION: US/09/889,331B   TIME: 17:11:44

Input Set : **A:\249-167 subst seq listing.txt**
Output Set: **N:\CRF4\01142005\I889331B.raw**

L:3683 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96 after pos.:16
M:341 Repeated in SeqNo=96
L:3754 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:0
L:3843 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103 after pos.:0